

EXPLORING THE KNOWLEDGE OF MATERNAL UNDERNUTRITION ON OBSTETRIC OUTCOMES AMONG YOUNG PREGNANT WOMEN IN LAHORE, PAKISTAN: A QUALITATIVE STUDY

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ABSTRACT

Objective: Maternal undernutrition remains a persistent contributor to adverse obstetric outcomes in Pakistan. This study explores the relationship between young pregnant women's knowledge of undernutrition and their antenatal practices and perceived obstetric outcomes in Lahore.

Methods: A qualitative descriptive study was conducted at Lady Wallington, Lahore. Using purposive sampling, data were collected from 232 young pregnant women attending the outdoor (outpatient) department. Semi-structured interviews explored awareness of dietary requirements in pregnancy, recognition of undernutrition signs, sources of information, and perceived links with obstetric outcomes. Interviews were audio-recorded, transcribed, and analyzed thematically.

Results: Among 232 young pregnant women, more than four-fifths recognized the link between maternal undernutrition and symptoms such as tiredness and reduced breast milk, yet only about two-thirds associated it with preterm delivery or neonatal complications, reflecting partial awareness. These statistical results support the thematic findings that while women understand immediate physical effects, knowledge of long-term obstetric risks and the role of balanced nutrition remain limited.

Conclusion: The findings conclude that although young pregnant women in Lahore recognize some immediate effects of undernutrition, critical gaps in knowledge about balanced diets and long-term obstetric risks highlight the need for targeted nutrition education and support.

Keywords: Maternal Undernutrition; Obstetric Outcomes; Young Pregnant Women

INTRODUCTION

Maternal nutrition plays a fundamental role in shaping pregnancy and childbirth outcomes, particularly among young women who are already biologically and socially vulnerable. Adequate nutrition supports fetal growth, maternal health, and lactation, while undernutrition increases the risk of complications such as intrauterine growth restriction, preterm birth, and maternal morbidity

(Gopalan, 1962; Lowensohn, Stadler, & Naze, 2016). Despite global progress, undernutrition persists as a critical determinant of maternal and neonatal health, particularly in low- and middle-income countries where dietary deficiencies remain widespread (UNICEF, 2003).

Undernutrition during pregnancy has both immediate and long-term consequences. Studies

highlight that malnourished mothers face higher risks of adverse obstetric outcomes including anemia, obstructed labor, and poor neonatal survival (Safaa, Eshra, & Saleem, 2016; Poggiano et al., 2017). Beyond physical health, chronic maternal malnutrition also influences cognitive development in children, underscoring its intergenerational impact (Kar, Rao, & Chandramouli, 2008). Screening tools such as Nutritional Risk Screening (NRS-2002) have emphasized the importance of identifying and managing malnutrition early in clinical care, yet their utilization in resource-constrained contexts like Pakistan is often limited (Kondrup, Rasmussen, Hamberg, & Stanga, 2003).

In Pakistan, particularly in urban centers such as Lahore, maternal undernutrition remains a public health challenge influenced by poverty, limited dietary diversity, and gaps in nutritional awareness. Adolescents and young pregnant women are at heightened risk due to increased nutritional demands and restricted access to health services (Allen & Dror, 2018). Understanding their knowledge of maternal undernutrition and its impact on obstetric outcomes is vital for tailoring context-specific interventions. This qualitative study therefore seeks to explore how young pregnant women in Lahore perceive and understand maternal undernutrition, with the aim of informing evidence-based strategies to improve maternal and neonatal health outcomes.

1. Materials and Methods

This study employed a qualitative research approach to explore the knowledge of maternal undernutrition and its impact on obstetric outcomes among young pregnant women. The research was conducted at Lady Willingdon Hospital, Lahore, focusing on women attending the outpatient department. A purposive sampling technique was adopted to ensure the inclusion of participants who could provide rich insights into the study objectives.

Data were collected from 232 young pregnant women through a structured questionnaire designed to measure awareness and knowledge regarding the importance of nutrition during pregnancy. The questionnaire was administered face-to-face, and responses were carefully documented. Among the participants, 141 were educated women, while 91 were uneducated,

allowing a comparative understanding of the role of education in shaping nutritional awareness.

In addition to the survey, in-depth interview sessions were conducted with obstetricians practicing in Lahore to triangulate the findings and gain professional perspectives on maternal undernutrition and its outcomes. The inclusion criteria specified all pregnancy-bearing females, while non-pregnant women were excluded from the study. Data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS), where descriptive statistics such as mean and standard deviation were applied to summarize the results.

2. Results

Analysis of responses from 232 young pregnant women at Lady Willingdon Hospital, Lahore, alongside interviews with three expert gynecologists, revealed several key themes related to maternal undernutrition and obstetric outcomes.

Theme 1: Awareness of Maternal Undernutrition and Pregnancy Outcomes

Most participants recognized the adverse consequences of maternal undernutrition. About 83.6% (194/232) agreed or strongly agreed that malnutrition leads to low birth weight, neonatal morbidity, and prenatal mortality. Experts strongly supported this, emphasizing that undernourished mothers almost always give birth to underweight or health-compromised infants. Similarly, nearly 62% (143/232) believed malnutrition contributes to premature delivery and abortion, aligning with clinical observations of higher preterm birth risks in undernourished women.

Theme 2: Physical Manifestations of Malnutrition

Awareness of maternal symptoms was relatively strong. Approximately 85.4% (198/232) agreed that malnutrition causes tiredness and dizziness. Likewise, 78.9% (183/232) agreed that breast milk production decreases when the mother is undernourished. According to gynecologists, these symptoms are consistent with iron and micronutrient deficiencies commonly observed in malnourished women during pregnancy.

Theme 3: Immunity and Health Vulnerability

Nearly 75.4% (175/232) of respondents agreed that malnutrition weakens maternal immunity, while about a quarter (57/232) disagreed. Experts reiterated that nutritional deficiencies reduce the body's ability to resist infections, making undernourished women more vulnerable to illness throughout pregnancy.

Theme 4: Socio-Cultural Influences on Nutrition

Responses reflected divided perceptions regarding cultural beliefs. A majority (73.3%) rejected the idea that cultural beliefs significantly expose women to malnutrition, while 26.7% supported it. Experts clarified that illiterate women were more likely to be influenced by restrictive traditional beliefs, whereas educated women generally resisted harmful cultural practices.

Theme 5: Ignorance, Poverty, and Household Dynamics

Socioeconomic and behavioral determinants were widely acknowledged. Over 76.8% (178/232) agreed that ignorance contributes to malnutrition, while experts emphasized that both lack of awareness and deliberate neglect of proper diet—even when resources are available—play key roles. Additionally, 87% (202/232) of respondents affirmed that poverty is a leading cause of malnutrition, with experts stressing its role in limiting access to balanced diets. The majority (84.1%) also recognized that low income combined with multiple children increases the risk of maternal undernutrition, reflecting the burden of resource strain within larger families.

Theme 6: Dietary Practices and Nutritional Balance

Awareness about dietary balance was moderate. Around 65.1% (151/232) agreed that consuming only carbohydrates results in malnutrition, though a significant proportion disagreed. Experts reinforced that balanced intake of proteins, vitamins, and minerals—alongside carbohydrates—is crucial for healthy pregnancies and favorable obstetric outcomes.

3. Discussion

Our findings—strong awareness of fatigue/dizziness and reduced lactation as manifestations of undernutrition, but mixed

recognition of its links to preterm birth and neonatal risk—mirror broader evidence from South Asia and Pakistan. Recent analyses show maternal undernutrition and anemia remain highly prevalent and are tightly coupled with low birth weight (LBW), small-for-gestational-age infants, and preterm delivery; in Pakistan, anemia trends among pregnant women remain substantial and clinically consequential (Mahar et al., 2024; Wang et al., 2025). In parallel, systematic reviews confirm that inadequate maternal dietary diversity elevates risks of LBW and preterm birth, underscoring why balanced intake beyond carbohydrates is critical—precisely the knowledge gap many respondents displayed (Javadi et al., 2024; Tareke et al., 2024).

The socio-structural gradient evident in our results—poverty, larger family size, and “ignorance” driving vulnerability—aligns with local and regional data. A recent Lahore-based study reported low pregnancy-nutrition knowledge and limited counseling during antenatal care, with knowledge positively associated with education and income—patterns consistent with our educated vs. less-educated contrasts (Affaf, 2024). Beyond individual knowledge, qualitative work from Punjab documented practical barriers (food cost, access, morning sickness, and competing household priorities) that blunt intentions to eat well, indicating that awareness alone rarely translates into adequate intake without structural support (Asim et al., 2022).

Cultural beliefs appeared divisive in our sample—many rejected their influence while a sizable minority endorsed it. Contemporary qualitative syntheses across South Asia and Africa show persistent food taboos (e.g., “hot/cold” foods, sour items) that can restrict nutrient-dense foods during pregnancy, with education moderating adherence—exactly what our experts observed (Chakona & Shackleton, 2019; Hashmi et al., 2025). These patterns, combined with evidence that interventions limited to pregnancy often arrive “too late,” strengthen the case for earlier, community-embedded strategies that integrate counseling, cash/food assistance, and preconception nutrition for adolescents and young women (Saville et al., 2025; González-Fernández et al., 2024).

Taken together, the literature supports our thematic interpretation: most women grasp symptom-level consequences, but gaps persist

around balanced diet requirements and risk pathways to adverse obstetric outcomes. Socioeconomic constraints and culturally mediated practices further shape behavior. Addressing these requires layered responses—routine screening for nutritional risk, context-specific counseling during ANC, and upstream, preconception-focused policies that buffer poverty-related constraints (Mahar et al., 2024; Tareke et al., 2024; Saville et al., 2025).

4. Conclusion

The study highlights that while young pregnant women in Lahore demonstrate partial awareness of the effects of undernutrition, significant gaps remain regarding balanced dietary requirements, cultural influences, and the risks of adverse obstetric outcomes. To address these gaps, it is recommended that antenatal care services integrate structured nutrition education, community-based awareness programs, and poverty-sensitive interventions to improve maternal diets and ultimately reduce poor pregnancy outcomes.

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